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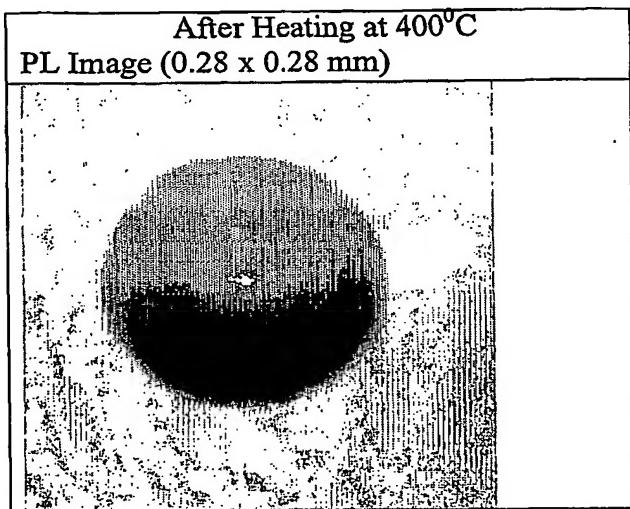
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(54) Title: DETECTION METHOD AND APPARATUS METAL PARTICULATES ON SEMICONDUCTORS



(57) Abstract: A method of detecting surface particulate defects, and especially metal particulates, in semiconductors such as silicon, to characterise defects likely to have an effect on the electrical activity of such semiconductor materials, comprises exposing the surface of the semiconductor structure in the vicinity of a surface particulate to at least one high-intensity beam of light and collecting and processing the photoluminescence response; and using the result to identify unacceptable contamination levels resulting from diffusion of contaminant from particulate into semiconductor structure. Optionally, the semiconductor is annealed and photoluminescence responses collected before and after annealing to identify contaminant diffusion rates. Apparatus for the same is also described.